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reference, the Examiner indicated that there were four channels 12 each defined by raised edges 13. With respect to the applied JP 60-7058 reference, the Examiner indicated that the channels 4 were defined by raised edges at each end of the channel. Attorney Boshnick traversed this interpretation, and the Examiner appeared to agree that if we were to amend these two independent claims to recite that each collector plate had a plurality of parallel channels, then such an amendment would appear to overcome the art of record.

#### REMARKS

Initially, Applicants would like to express their appreciation to the Examiner for the detailed Official Action provided. Upon entry of the present amendment, the specification and claims 24-26, 28-31 and 34-35 will have been amended. Claims 24-35 remain pending for consideration by the Examiner.

The Examiner has objected to the specification, suggesting that the "claim of priority" phrase be moved to the beginning of the specification. By the present amendment, Applicants complied with the Examiner's suggestion, and respectfully request that the Examiner withdraw the objection to the specification.

The Examiner has rejected claims 26, 28, 29 and 31-33 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors, at the time the application was filed, had possession of the claimed invention. With respect to claim 26,

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applicant has amended this claim to recite "... positive electrode collector plates and said negative electrode collector plates are made of one of nickel sheet and nickel-plated steel sheet," as discussed at the above-noted interview, which is consistent the Examiner's interpretation of this limitation for prosecution purposes, and which is thus readily understood by those skilled in the art. -

With respect to claim 28, Applicants have amended this claim to recite that the solder material is configured to be reflowed after being applied *in said channels* of said positive and negative electrode *collector* plates, as discussed at the above-noted interview, which Applicants assert expressly recites what was previously implied by this claim and original claim 5.

With respect to claims 29 and 31-33, while Applicants respectfully traverse, as discussed at the above interview, the Examiner's assertion that the limitation "said plurality of bent portions bent at random angles" is not in the original disclosure, Applicants have removed this recitation from all pending claims solely to expedite the patent application process in a manner consistent with the PTO's patent business goals, 65 Fed. Reg. 54603 (September 8, 2000). It is thus respectfully requested that the Examiner withdraw the rejection of claims 26, 28, 29 and 31-33 under 35 U.S.C. § 112, first paragraph.

The Examiner has rejected claims 34-35 under 35 U.S.C. § 112, second paragraph, as being indefinite with respect to the limitation "said plurality of channels". Applicants

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have included this limitation as ---a plurality of parallel channels--- into independent claims 24 and 30, thereby obviating the Examiner's rejection. Further, although Applicants respectfully disagree with the Examiner's rejection under 35 U.S.C. § 112, second paragraph, in that one skilled in the art would readily understand that the claimed electrode collector plate has a plurality of parallel channels, Applicants have amended these claims, solely to expedite the patent application process in a manner consistent with the PTO's patent business goals, 65 Fed. Reg. 54603 (September 8, 2000). It is thus respectfully requested that the Examiner withdraw the rejection of claims 34-35 under 35 U.S.C. § 112, second paragraph.

The Examiner has rejected claims 24-26 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,732,124 to CAILLEY, finding that this reference teaches all limitations recited in these claims. Applicants respectfully traverse the Examiner's rejection. Specifically, none of the references of record teaches or discloses the above-recited plurality of parallel electrode plate channels. Rather, for example, the applied CAILLEY reference has a cruciform electrode collector plate, each arm thereof having a U-shaped cross section.

With respect to this claimed feature, Applicants note that these features have been included to advance prosecution of the application to allowance, and should not be considered as surrendering equivalents of the territory between the claims prior to the present amendment and the amended claims.

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Absent a disclosure in a single reference of each and every element cited in a claim, a *prima facie* case of anticipation cannot be made under 35 U.S.C. § 102. Since the applied CAILEY reference fails to disclose each and every element recited in independent claims 24 and 29, these claims, and the claims dependent therefrom, are not anticipated thereby.

With respect to dependent claims 25-26, which have been rejected under 35 U.S.C. § 102(b), and dependent claims 27 and 28, which have been rejected under 35 U.S.C. § 103(a), these claims are dependent from claim 24, which is allowable for at least the reasons discussed *supra*; thus, these dependent claims are also allowable for at least these reasons. Further, all dependent claims recite additional features which further define the present invention over the references of record. Additionally, these amended dependent claims are not intended to further limit or narrow the subject matter thereof. Rather, these dependent claims merely clarify the subject matter recited therein. Thus these amendments are cosmetic in nature, and are not intended to narrow the scope of the claims. Accordingly, the amendments to these dependent claims should not be considered a decision to narrow the claims in any way.

The Examiner has rejected claim 29 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,432,574 to SUZUKI et al. As discussed at the above-noted interview and in the Response of December 11, 2002, this reference is not a proper reference under 35 U.S.C. § 102(e), since it issued in the U.S. on August 13, 2002 and was filed in the U.S. on

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June 28, 2001, which is after the priority date (September 21, 1999) of the present application. In compliance with the Examiner's requirement, Applicants submit herewith a certified translation of the priority document (*i.e.*, JP H11-267001), and thus respectfully request that the Examiner withdraw the rejection of claim 29 under 35 U.S.C. § 102(e).

The Examiner has rejected claim 29 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over OWEIS. The Examiner has also rejected claims 31-33 under 35 U.S.C. § 103(a) as being unpatentable over SUGIKAWA in view of OWEIS. The Examiner has further rejected claims 31 and 32 under 35 U.S.C. § 103(a) as being unpatentable over OWEIS in view of CHEU. Specifically, the Examiner has not accorded any patentable weight to the claimed limitation "said plurality of bent portions bent at random angles" and has further interpreted this limitation as a product-by-process limitation. As discussed at the above-interview, Applicants respectfully traverse the Examiner's interpretation that this limitation is a "product-by-process" limitation and assert that this limitation is clearly disclosed in the specification readily understood by those skilled in the art. Nevertheless, Applicants have removed this limitation from all pending claims solely to expedite the patent application process in a manner consistent with the PTO's patent business goals, 65 Fed. Reg. 54603 (September 8, 2000). Further, in accordance with the above-noted interview, Applicants have amended independent claims 29 and 31 to recite that not all of said bent portions on a said edge are uniform in length, a limitation neither

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taught nor disclosed by any of the references of record, as discussed with the Examiner. Applicants further assert that the amendments to claims 29 and 31 merely clarify the subject matter originally recited in the claims. Thus these amendments are cosmetic in nature, and are not intended to narrow the scope of the claims. Accordingly, the amendments to claims 29 and 31 should not be considered a decision by Applicants to narrow the claims in any way.

The Examiner has rejected claims 24, 25, 30, 34 and 35 under 35 U.S.C. § 103(a) as being unpatentable over OWEIS in view of JP60-7058. Specifically, the Examiner has found that OWEIS discloses all of the claimed limitations except for the electrode collector plate channel defined by raised edges protruding beyond a plane defined by an electrode collector plate, but has determined that JP60-7058 teaches such a limitation, and concludes that it would have been obvious to incorporate this feature into the device of OWEIS.

Applicants respectfully traverse the above rejection. Specifically, as discussed *supra*, none of the applied references teaches or discloses the above-discussed plurality of parallel electrode plate channels, as claimed in independent claims 24 and 30. Rather, for example, the applied JP reference has an electrode collector plate having a plurality of radially extending channels, none of which are parallel and none of which have raised edges protruding beyond a plane defined by the electrode collector plate.

With respect to rejected dependent claims 25, 34 and 35, these claims are dependent from one of claims 24 and 30, which are allowable for at least the reasons discussed *supra*;

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thus, these dependent claims are also allowable for at least these reasons. Further, all dependent claims recite additional features which further define the present invention over the references of record. Accordingly, the Examiner is respectfully requested to withdraw all rejections under 35 U.S.C. § 103(a).

Further, Applicants assert that the above-discussed amendments to the claims do not raise new issues that require the Examiner to conduct an additional search. Thus, Applicants respectfully submit that each and every pending claim of the present application meets the requirements for patentability under 35 U.S.C. §§ 102, 103 and 112, and respectfully request the Examiner to indicate the allowance of each and every pending claim in the present application.

#### SUMMARY AND CONCLUSION

In view of the foregoing, it is submitted that the present amendment is in proper form and that none of the references either taken together or taken alone in any proper combination thereof, anticipate or render obvious Applicants' invention. In addition, the applied references of record have been discussed and distinguished, while significant features of the present invention have been pointed out. Accordingly, consideration of the present amendment, reconsideration of the outstanding Official Action and allowance of the present application and all of the claims therein are respectfully requested and are now believed to be appropriate.

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Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should there be any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
Shoji KARASAWA et al.

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## MARKED-UP COPY OF AMENDED CLAIMS

--24. (Amended - Marked-Up Copy) A battery comprising an electrode plate unit, the electrode plate unit including:

a group of electrode plates comprising a plurality of positive electrode plates and a plurality of negative electrode plates that are alternately stacked upon one another with intervening separators therebetween, wherein:

edges of said plurality of positive electrode plates protrude beyond edges of said plurality of negative electrode plates on one side of said group of electrode plates, and edges of said plurality of negative electrode plates protrude beyond edges of said plurality of positive electrode plates on an opposite side of said group of electrode plates;

a positive electrode collector plate attached to said protruding edges of said plurality of positive electrode plates and having a plurality of parallel positive electrode collector plate [channel defined by] channels each having raised edges protruding beyond a plane defined by said positive electrode collector plate, said raised edges of said positive electrode collector plate [channel] channels on a side of said positive electrode collector plate attached to said protruding edges of said plurality of positive electrode plates; and

a negative electrode collector plate attached to said protruding edges of said plurality of negative electrode plates and having a plurality of parallel negative electrode collector

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plate [channel defined by] channels each having raised edges protruding beyond a plane defined by said negative electrode collector plate, said raised edges of said negative electrode collector plate [channel] channels on a side of said negative electrode collector plate attached to said protruding edges of said plurality of negative electrode plates.

25. (Amended - Marked-Up Copy) The battery according to claim 24, wherein at least one of a said positive electrode collector plate channel and a said negative electrode collector plate channel [extend at intervals on at least one of] extends along a respective at least one positive electrode collector plate and said negative electrode collector plate, in a direction substantially parallel to the direction in which said positive electrode plates and said negative electrode plates are stacked.

26. (Amended - Marked-Up Copy) The battery according to claim 24, wherein said positive electrode collector plates and said negative electrode collector plates are made of one of nickel sheet and nickel-plated steel sheet.

28. (Amended - Marked-Up Copy) The battery according to claim 27, wherein:  
said solder material is configured to be applied to said positive and negative electrode collector plates prior to being applied to said protruding edges of said plurality of positive and negative electrode plates; and

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said solder material is configured to be reflowed after being applied [to] in said [protruding edges] channels of said [plurality of] positive and negative electrode collector plates.

29. (Amended - Marked-Up Copy) A battery comprising an electrode plate unit, the electrode plate unit including:

a plurality of positive electrode plates and a plurality of negative electrode plates that are alternately stacked upon one another with intervening separators therebetween; and

an electrode collector plate attached to protruding edges of at least one of said plurality of positive electrode plates and said plurality of negative electrode plates;

a plurality of bent portions, each bent portion of said plurality of bent portions respectively formed on an edge of said protruding edges, [said plurality] wherein not all of said bent portions [bent at random angles] on a said edge are uniform in length.

30. (Amended - Marked-Up Copy) A battery comprising an electrode plate unit, the electrode plate unit including:

a group of electrode plates comprising a plurality of positive electrode plates and a plurality of negative electrode plates that are alternately stacked upon one another with intervening separators therebetween, wherein:

edges of said plurality of positive electrode plates protrude beyond edges of said plurality of negative electrode plates on one side of said group of electrode plates,

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each said edge of said edges of said plurality of positive electrode plates having a slit therein; and

edges of said plurality of negative electrode plates protrude beyond edges of said plurality of positive electrode plates on an opposite side of said group of electrode plates, each said edge of said edges of said plurality of negative electrode plates having a slit therein;

a positive electrode collector plate attached to said protruding edges of said plurality of positive electrode plates and having a plurality of parallel positive electrode collector plate [channel defined by] channels each having by raised edges protruding beyond a plane defined by said positive electrode collector plate, said raised edges of said positive electrode collector plate [channel] channels on a side of said positive electrode collector plate attached to said protruding edges of said plurality of positive electrode plates; and

a negative electrode collector plate attached to said protruding edges of said plurality of negative electrode plates and having a plurality of parallel negative electrode collector plate [channel defined by] channels each having raised edges protruding beyond a plane defined by said negative electrode collector plate, said raised edges of said negative electrode collector plate channel on a side of said negative electrode collector plate attached to said protruding edges of said plurality of negative electrode plates.

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31. (Amended - Marked-Up Copy) A battery comprising an electrode plate unit, the electrode plate unit including:

a plurality of positive electrode plates and a plurality of negative electrode plates that are alternately stacked upon one another with intervening separators therebetween, lead portions of each of said plurality of positive electrode plates and lead portions of each of said plurality of negative electrode plates extending along a respective edge thereof;

a collector plate attached to said lead portions of at least one of said plurality of positive electrode plates and said plurality of negative electrode plates; and

a plurality of bent portions, each bent portion of said plurality of bent portions respectively formed on a said edge of said plurality of positive electrode plates and said plurality of negative electrode plates, [said plurality] wherein not all of said bent portions [bent at random angles] on a said edge are uniform in length.

wherein said lead portions comprise a locator configured to position said edges of at least one of said positive electrode plates and said negative electrode plates with respect to said collector plate.

34. (Amended - Marked-Up Copy) The battery according to claim 24, further comprising a planar portion extending between adjacent said channels of [said plurality of channels] at least one of said positive electrode collector plate and said negative electrode collector plate.

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35. (Amended - Marked-Up Copy) The battery according to claim 30, further comprising a planar portion extending between adjacent said channels of [said plurality of channels] at least one of said positive electrode collector plate and said negative electrode collector plate.---